CAIRO

Appl. No. 10/720,172

August 8, 2006

**AMENDMENTS TO THE DRAWINGS** 

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes

Figs. 1-3, replaces the original sheet including Figs. 1-3. In Figure 1, a "Prior Art" label has

been added.

Attachment: Replacement Sheet(s)

**Annotated Sheet Showing Changes** 

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## REMARKS/ARGUMENTS

Claims 1-14 and 16 are present in this application. By this Amendment, the specification, Fig. 1 and claims 1, 4, 8 and 10 have been amended, and claim 15 has been canceled. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

With reference to the Office Action, in the drawing amendment herein, Fig. 1 is amended to include a "prior art" legend. Withdrawal of the objection is requested.

The drawings were further objected to for missing reference numerals 16, 18. These reference numerals can be found, however, in Fig. 6. The specification has been amended to reference Fig. 6. Withdrawal of the objection is requested.

Claims 4, 5, 13 and 14 were rejected under 35 U.S.C. §112, first paragraph. The Office Action contends that since claim 4 defines a flange formed on one edge of the adapter sleeve, it is unclear how the interlocking mechanism is secured between the core and adapter sleeve as recited in claim 1. The Office Action, however, takes a narrow interpretation of the term "between." As would be clear to those of ordinary skill in the art, the interlocking mechanism is intended to encompass any structure secured between (i.e., among, around, across) the core mandrel and the selected one of the adapter sleeves. As such, the flange formed on one edge of the adapter sleeve has an opening for a connector that secures the flange to an axial face of the core mandrel. Thus, the flange extends between the core mandrel and the adapter sleeve. Applicant thus respectfully submits that the claims satisfy the requirements of 35 U.S.C. §112, first paragraph. Withdrawal of the rejection is respectfully requested.

Claims 1, 6 and 7 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 1,114,426 to Aitken. Without conceding this rejection, claim 1 has been amended herein to include the

subject matter of claim 8. Applicant thus respectfully submits that this rejection is moot. Withdrawal of the rejection is requested.

Claims 1-3 and 6-8 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,558,610 to Byung-Gie et al. This rejection is respectfully traversed.

As noted, claim 1 has been amended to include the subject matter of claim 8. With regard to claim 8, the Office Action references a "plurality of adapter sleeves 3, 21, 20 having varying exterior dimensions" in the Byung-Gie patent. Applicant respectfully submits, however, that this conclusion is misplaced. As described in the specification, in order to accommodate varying size part diameters, the universal mandrel of the invention may include a plurality of adapter sleeves 14 of varying exterior dimensions. This concept enables the rapid and cost-efficient implementation of design revisions and designs for different sized turbine machinery. Claim 1 defines a plurality of adapter sleeves that comprise varying exterior dimensions. The spacers 3, 21 and rolling ring 20 in the Byung-Gie patent do not in any manner function to accommodate varying size part diameters. In fact, each of the elements 3, 21 are used on the roller at the same time. These elements thus cannot anticipate the claimed plurality of adapter sleeves, a selected one of which is securable to the core mandrel. Moreover, the members in the Byung-Gie patent lack the claimed exterior dimensions that vary from adapter sleeve to adapter sleeve. Applicant thus respectfully submits that the rejection is misplaced.

With regard to dependent claims 2, 3, 6 and 7, Applicant submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1 and 6-9 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 6,468,193 to Shimoda. This rejection is respectfully traversed.

As noted, without conceding this rejection, claim 1 has been amended to include the subject matter of claim 8. In this context, the Office Action references "the plurality of adapter sleeves 7,5,4 having varying exterior dimensions" in the Shimoda patent. These members in the Shimoda patent, however, are not used interchangeably in order to accommodate varying size part diameters. Rather, the press fit member 7 secures the shaft portion within a metal pipe 4, and an elastic body 5 is formed on the metal pipe. The elastic body 5 is the outermost surface of the squeeze roller. Applicant respectfully submits that these components in the Shimoda patent do not in any manner anticipate the claimed plurality of adapter sleeves having exterior dimensions that vary from adapter sleeve to adapter sleeve.

With regard to dependent claims 6, 7 and 9, Applicant submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 10-12, 15 and 16 were rejected under 35 U.S.C. §103(a) over Byung-Gie. In this context, however, claim 10 has been amended similar to claim 1 to include the subject matter of claim 8. For at least the reasons discussed above, Applicant thus respectfully submits that this rejection is moot. Withdrawal of the rejection is requested.

Claims 4, 5, 13 and 14 were rejected under 35 U.S.C. §103(a) over Byung-Gie in view of U.S. Patent No. 2,005,885 to Brindley. This rejection is respectfully traversed.

Claim 4 has been rewritten in independent form. The Office Action contends that the Brindley patent discloses the use of a flange 21 having a connector 23 to fasten a sleeve to a mandrel. Applicant respectfully submits, however, that this characterization of the Brindley structure is inaccurate. As described in the Brindley specification, end plates 21 secure the molded fiber section 14 to the cylindrical body portion 16. The end plates are fastened to the

plugs 17 by a suitable connector 23 (see paragraph bridging pages 2-3). The structure according to the invention defined in claim 4, in contrast, recites that the flange is "formed on one edge of the adapter sleeve." The end plate 21 in the Brindley structure, however, is not formed on an edge of an adapter sleeve; rather, the end plate 21 is secured to the plug 17 to hold the fiber section 14 to the cylindrical body portion 16. In view of at least this distinction, Applicant respectfully submits that the rejection is misplaced.

Claim 5 is dependent on claim 4, and Applicant submits that claim 5 is allowable at least by virtue of its dependency on an allowable independent claim.

With regard to claims 13 and 14, Applicant submits that these claims are also allowable for the reasons discussed above and in view of their dependency on an allowable independent claim. That is, the Brindley patent does not correct the deficiencies noted above with regard to the Byung-Gie patent.

Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims are patentable over the art of record and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Prompt passage to issuance is earnestly solicited.

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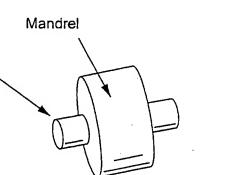
Respectfully submitted,

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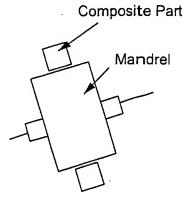


Fig. 1 (FRIOR ART)

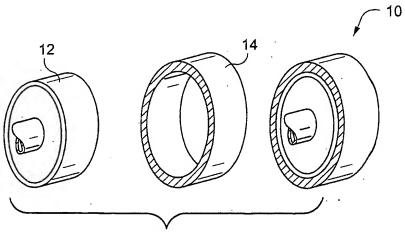
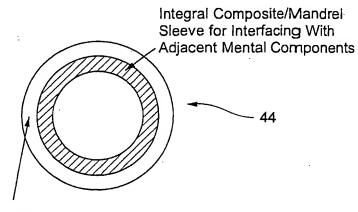


Fig. 2



Filament Wound Composite Part

Fig. 3